

What is claimed is:

1. Leakage compensation system in a control device for a
fully hydraulic steering system with a supply connection
5 arrangement having a high-pressure connection and a low-
pressure connection, a working connection arrangement having
two working connections, a control section between the supply
connection arrangement and the working connection arrangement,
a control element for activating the control section, a
10 steering member and an auxiliary fluid path with a valve
arrangement, through which hydraulic fluid can be supplied or
drained off, **characterised in** that the valve arrangement (A6,
A7) of the auxiliary fluid path (12) can be activated via the
control element (2).

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2. The system according to claim 1, **characterised in** that in
a predetermined operating area of the control element (2)
outside the neutral position of the control element (2), the
valve arrangement (A6, A7) enables a correction of a
20 correlation between the position of the control element (2) and
the position of the steering member (3).

3. The system according to claim 1, **characterised in** that the
valve arrangement (A6, A7) prevents a correction via the
25 auxiliary fluid path (12) in a predetermined operating end area
of the control element (2).

4. The system according to claim 1, **characterised in** that the
valve arrangement (A6, A7) is made in the control section.

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5. The system according to claim 4, **characterised in** that the valve arrangement (A6, A7) has at least one adjustable throttling arrangement in the control section.

5 6. The system according to claim 5, **characterised in** that the control section has a housing (H), an outer rotary slide (Y) arranged to be rotatable in the housing and an inner rotary slide (I) arranged to be rotatable in the outer rotary slide, the throttling arrangement (A6, A7) being formed between the 10 inner and the outer rotary slide and/or between the outer rotary slide (Y) and the housing (H).

7. The system according to claim 5, **characterised in** that the throttling arrangement has several throttles (A6, A7, B) 15 connected in series.

8. The system according to claim 7, **characterised in** that at least one of the several throttles (A6, A7, B) is made as a fixed throttle (B).

20 9. The system according to claim 7, **characterised in** that one throttle (A7) is arranged between the inner and the outer rotary slide (I, Y) and one throttle (A6) between the outer rotary slide (Y) and the housing (H).

25 10. The system according to claim 7, **characterised in** that for each rotation direction the outer rotary slide (Y) has a throttling groove (S1R, S1L), which extends over part of its circumference and overlaps with both the opening of a working 30 connection (CR, CL) and the opening of the low-pressure connection (TR, TL), whereas the remaining part of the circumference has an auxiliary groove (S2R, S2L), which is offset laterally in relation to the throttling groove (S1R,

S1L) and only overlaps with the opening of the working connection (CR, CL) .

11. The system according to claim 10, **characterised in** that
5 the outer slide (Y) is surrounded by a circumferential groove (S3R, S3L), which is supplied with the pressure at the working connection (CL, CR) .

12. The system according to claim 11, **characterised in** that
10 for each rotation direction a projecting area (LR, LL) is provided on the circumference of the outer rotary slide (Y), said projecting area being surrounded by the circumferential groove (S3R, S3L), the throttling groove (S1R, S1L) and the auxiliary groove (S2R, S2L), an angle area of the outer rotary
15 slide (Y) being provided, in which both projecting areas (LR, LL) interrupt a connection between the low-pressure connection (TR, TL) and the working connection (CR, CL) .

13. The system according to claim 1, **characterised in** that the
20 auxiliary fluid path (12) is arranged between the working connection arrangement (CL, CR) and the low-pressure connection (T) .

14. The system according to claim 1, **characterised in** that
25 that the auxiliary fluid path (12) is arranged between the working connection arrangement (CL, CR) and an auxiliary low-pressure connection (T') provided separately from the low-pressure connection (T) .

15. The system according to claim 1, **characterised in** that the auxiliary fluid path (12) is provided between the high-pressure connection and the working connection arrangement (CR, CL) and bypasses the control section.

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16. The system according to claim 1, **characterised in** that the valve arrangement has at least one discretely formed valve, which can be activated via the control element (2).

10 17. The system according to claim 16, **characterised in** that one of the two rotary slides has a cam arrangement, which acts upon a valve.

15 18. The system according to claim 1, **characterised in** that the auxiliary fluid path (12) has an inlet, which is connected directly with the outlet of a priority valve (PV) or with a pump (P), and an outlet, which is connected with the working connection arrangement.

20 19. The system according to claim 1, **characterised in** that the valve arrangement has a non-return valve opening in the direction away from the priority valve.